

IN THE CLAIMS:

1-12. (Canceled)

13. (Currently amended) A solid oxide fuel cell, comprising:

a zirconia electrolyte,

a doped-zirconia layer deposited on said zirconia electrolyte;

a doped ceria layer deposited on said doped-zirconia layer;

a LSCF + doped-ceria layer deposited on said doped ceria layer; and

a LSCF layer deposited on said LSCF + doped-ceria layer, and wherein said

LSCF layer functions as a current collector.

~~a layer of doped ceria deposited on said zirconia electrolyte, and~~

~~— a cobalt iron based electrode deposited on the layer of doped ceria, said solid
oxide fuel cell having a peak power density of up to 1400 mW/cm² at 800 °C and up
to 900 mW/cm² at 700 °C.~~

14. (Original) The solid oxide fuel cell of Claim 13, having a power density in
the range of 250 mW/cm² to 1400 mW/cm² at a temperature range of 600 °C to 800
°C.

15. (Currently amended) The solid oxide cell of Claim 13, wherein said cobalt
iron-based electrode is composed of LSCF layer comprises (La,Sr)(Co,Fe)O.

16. (Canceled)

17. (Currently amended) The solid oxide fuel cell of Claim 13, wherein said doped-ceria layer is composed of comprises ceria doped with any element of the lanthanides a lanthanide.

18. (Currently amended) The solid oxide fuel cell of Claim 17, wherein the said ceria is doped with gadolinium or yttrium.

19-25 (Canceled)

26. (Currently amended) The solid oxide fuel cell of Claim 13, wherein said electrolyte has a thickness of $1\text{-}40 \mu\text{m}$, the layer of wherein said doped-ceria layer has a thickness of $0.5\text{-}40 \mu\text{m}$, and the cobalt iron based electrode wherein said LSCF layer has a thickness of $10\text{-}100 \mu\text{m}$.

27. (Currently amended) The solid oxide fuel cell of Claim 26, wherein said electrolyte has a thickness of $1\text{-}20 \mu\text{m}$, and said layer of doped-ceria layer has a thickness of $0.5\text{-}5 \mu\text{m}$.